

75th Air Base Wing



Quantifying Excess Hazardous Materials at Hill Air Force Base April 2011

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Introduction

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Introduction

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- The issue and disposal of excess expired materials is of significant concern to Hill AFB and impacts many different environmental programs.
- A team of environmental personnel and UEC's visited shops and inventoried the issued and in some cases even non-issued expired materials with scan guns



Background

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- **UECs expressed concern about the possibility of over reporting on various compliance reports as a result of having to dispose of excess expired material.**
- **While the issue of excess expired materials as a whole is large, issued unopened expired materials are of particular concern from a regulatory perspective.**
 - once materials are issued from a Hazardous Distribution Service Center (HDSC) to a shop, they are considered consumed
 - If a portion of these materials are expiring before ever being used, there is a potential of over-reporting on various compliance reports



Experimental Methods

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- It was proposed that a team of environmental personnel would visit the interested shops and inventory the issued expired materials with scan guns.
- Scanned inventory was then entered back into EESOH-MIS (HM) and dispositioned out of the system.
- Essentially this subtracted the material being issued and therefore considered consumed

Cont.



Experimental Methods, Cont'd



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- **There were five distinct excess materials categories identified:**
 - **Category 1** – Materials that go straight from Supply to Hazardous Waste Control Facility. These materials are never transferred to a HDSC for issue to a shop. Also included in the category are materials that are transferred to an HDSC from supply, but expire before they are issued to a shop.
 - **Category 2** – Materials that are issued to a shop, but are expired before being opened and used. This is the focus of our study. Because they are considered consumed unopened issue, this is of particular concern from an air quality compliance perspective.
 - **Category 3** – Materials that are issued to a shop, opened, but expire before all of the material can be used. Because the material expires before all of it is used, it must be wasted.

Cont.



Experimental Methods, Cont'd



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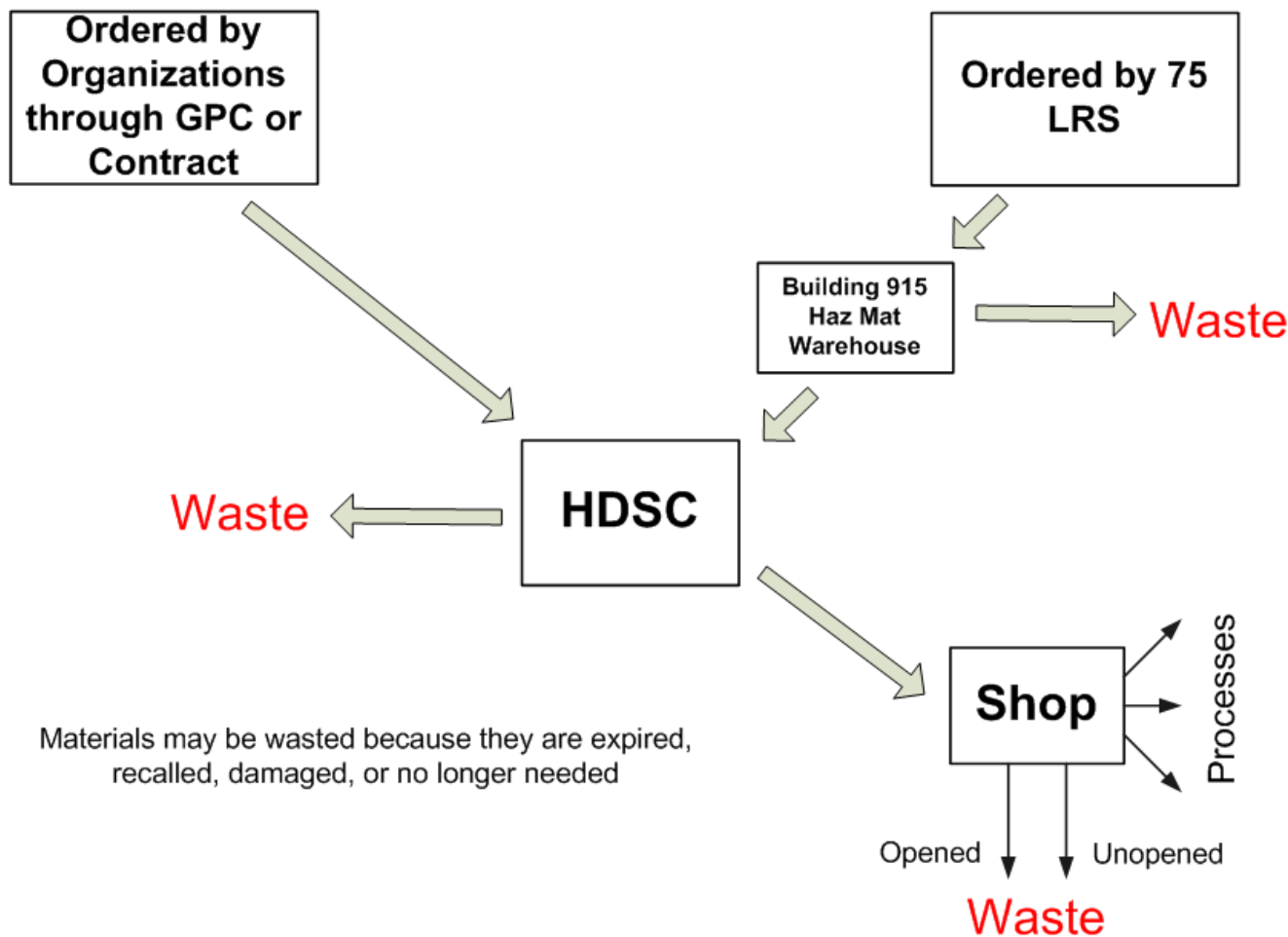
- **There were five distinct excess materials categories identified:**
 - **Category 4** – Materials purchased on a GPC card. Often times these materials are needed immediately or not available through supply, so they are purchased on a government credit card. Ideally these materials purchased on a government credit card will be entered into EESOH-Mis so that they can be tracked for various compliance reports.
 - **Category 5** – Materials purchased by a contractor to support a specific mission related task. These contractors support specific mission related tasks and bring on their own materials to support those tasks. Ideally this material data would then be entered into EESOH-Mis so these materials can be tracked through Hill AFB's materials tracking system.



Experimental Methods, Cont'd

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HAZARDOUS MATERIALS FLOW





Results and Discussion



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- **Scanning will be extended through the end of 2011 per Hill AFB's request, but the preliminary numbers are illustrated below.**
- **To date, 4,471 issued containers have been scanned totaling 10,169 pounds of wasted material. This equates to 1,193 pounds of VOC emissions which may have been inaccurately reported.**

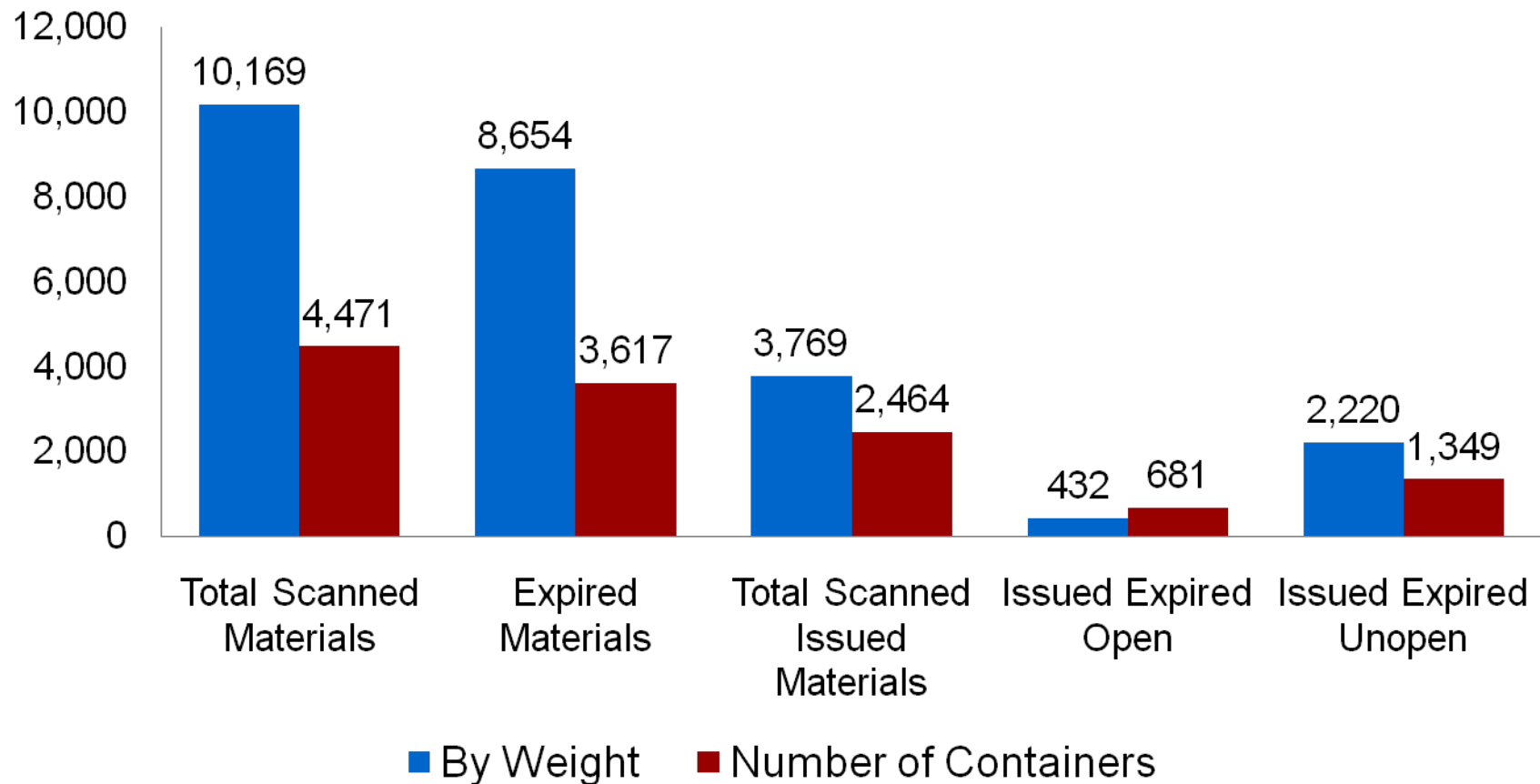


Results and Discussion, cont'd



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Scanned Materials



BE AMERICA'S BEST



Results and Discussion, cont'd



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■ So what do these numbers mean?

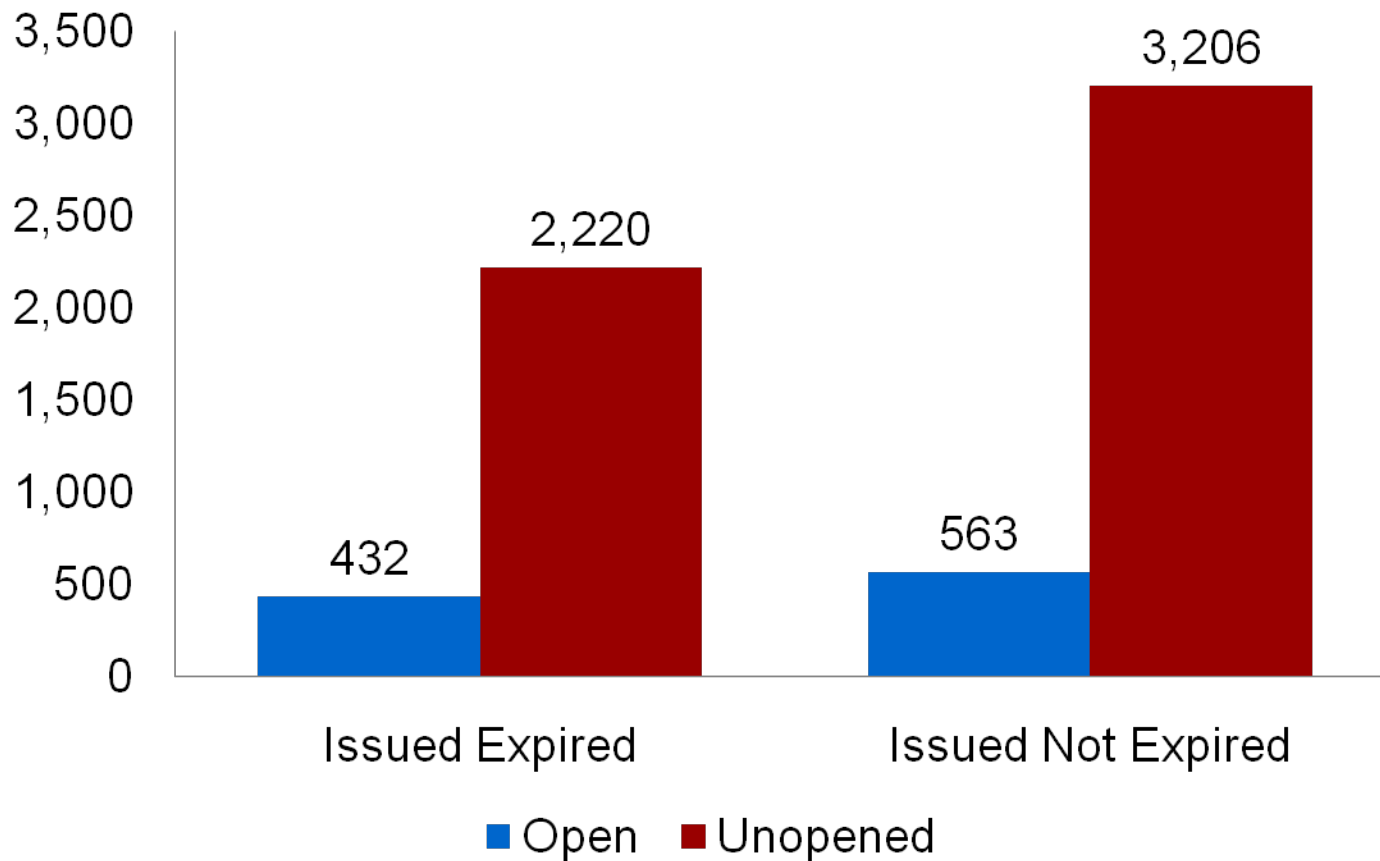
- The overall weight of issued materials in the areas scanned totaled 2,200,000 pounds – approximately 47% of the 4,650,000 pounds issued base-wide.
- In an eight-month timeframe, we have determined that about 0.081% of material (by weight) being issued in this sample area is waste.
- If this area is indicative of the amount of unused material across the base, we can assume that from a compliance perspective, over reporting is a non-issue.



Results and Discussion, cont'd

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Closer Look at Issued Materials Scanned by weight (lbs)

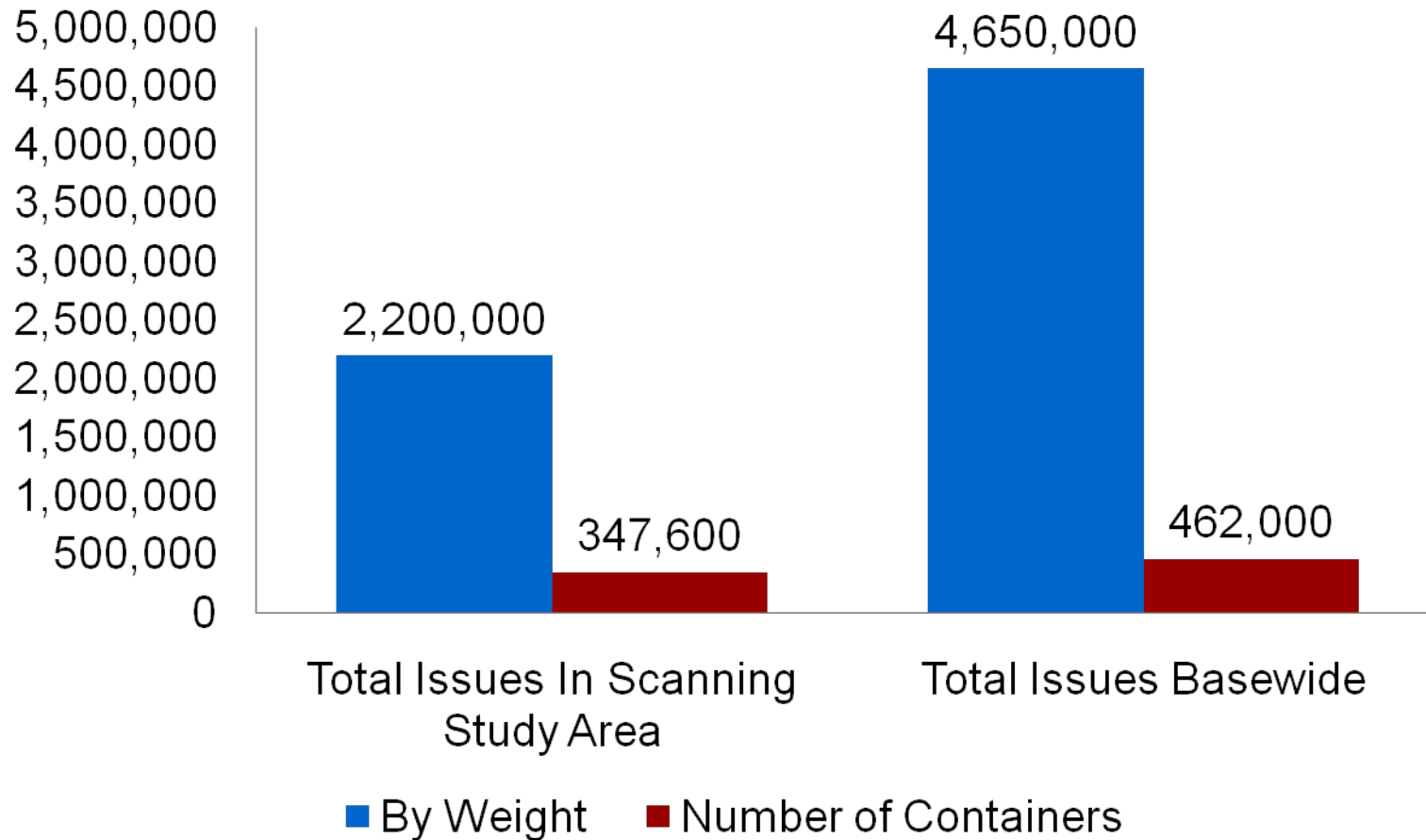




Results and Discussion, cont'd

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Broader Look at Material Issues Across Hill AFB





Results and Discussion, cont'd



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■ New Policy: 309th Maintenance Wing

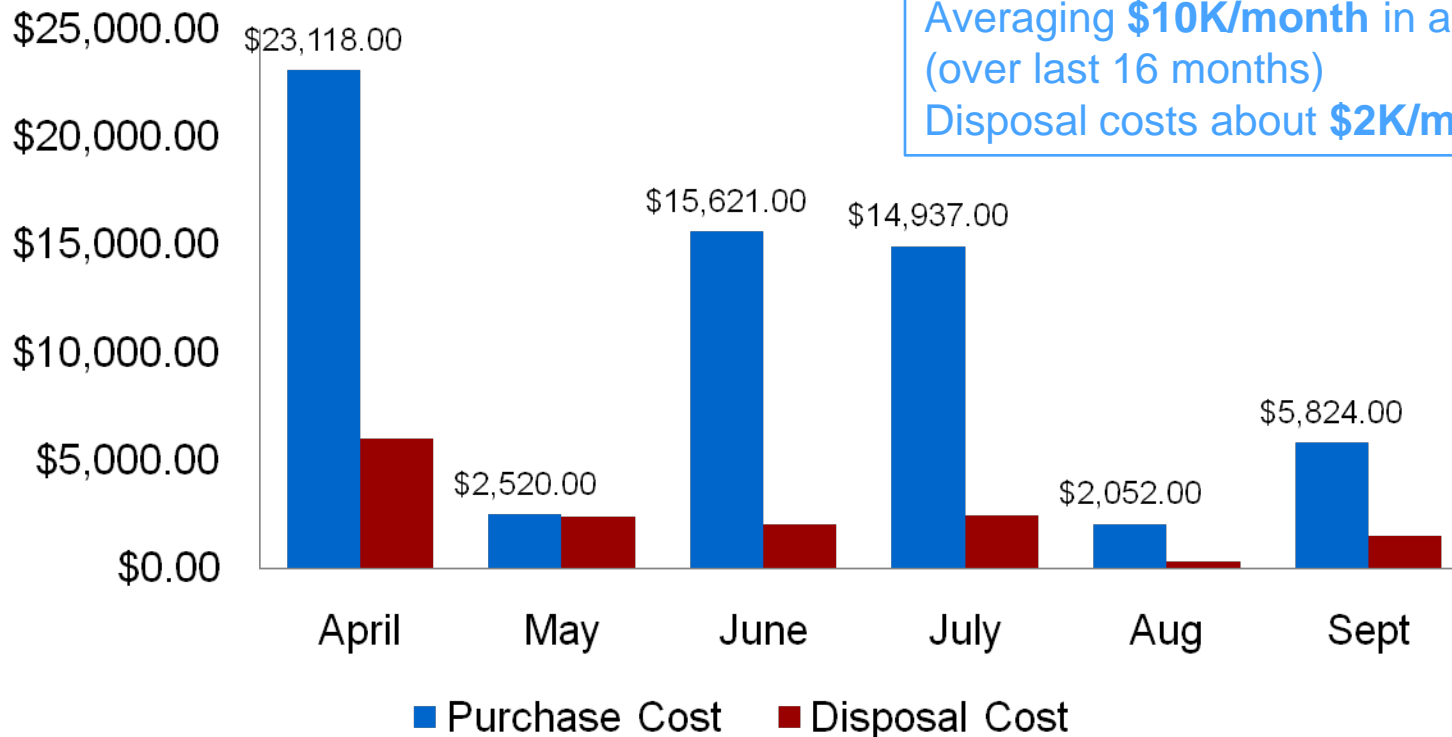
- Effective January 12, 2011, indicating that the shelf life of a product is equivocal to the service life.
- Prior to the enactment of this policy, personnel often continued to use expired materials until the product was used in its entirety.
- Now shops will be required to dispose of the material once it expires even if they are mid-project. We expect to see the amount of issued expired material to increase.
- Scanning will continue through 2011 to determine whether this more significantly impacts reporting.
- Since January 2011, we have seen an increase in the rate of containers being scanned that hold issued expired materials.
- Between May and January 11, we scanned an average of 168 containers of expired issues a month. From January 12 through March, we have averaged 230 containers.



Results and Discussion, cont'd

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Wasted Material (Bldg 915)



6 month total: **\$76,900** acquisition: **\$64,000**, disposal: **\$12,900** (20% of acquisition value)



Results and Discussion, cont'd

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Wasted Material (Bldg 915)

■ FY 2010 Summary (Oct 1 2009-Sept 30 2010):

- Total material acquisition costs: \$5,764,107
- Total acquisition value of waste: \$80,834
 - 1.4% of acquisition cost

Top 5 Classes of Wasted Materials

Material Class	FY10 Acq. Cost	FY10 Waste Acq. Value	% of Acq. Cost
Polyurethane	\$147,977	\$19,902	13.4
Sealing Compounds	\$999,954	\$18,573	1.9
Adhesives	\$249,021	\$17,541	7.0
Cleaning Compounds	\$502,734	\$3,778	0.8
Corrosion Products	\$64,129	\$2,697	4.2



Summary

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- **The original concept of the study was to evaluate unopened expired materials with respect to over-reporting on compliance reports.**
 - Once scanning started, it was learned that not only did we need to evaluate unopened materials, but we also needed to evaluate opened expired materials that are being disposed of before being fully used.
- **Often times materials are ordered and never even issued before they expire.**
 - This is an area that is Hill AFB will continue to evaluate and perhaps eventually draft policy in order to minimize hazardous waste fees associated with these excess materials and possibly even implement a solution from the material procurement side as well.



Summary, cont'd

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- **Based on initial data, early indications show that issued unopened and opened expired materials are not as much of a compliance concern as originally projected in terms of compliance over reporting.**
 - With the policy that the 309th Maintenance wing has implemented, effective January 2011, Hill AFB will continue to collect data to determine if over-reporting on various compliance reports is a concern.
 - Environmental personnel have already seen an increase in the number of containers scanned since January 2011, roughly a 37% increase.



Summary, cont'd

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- This study has also given environmental personnel a better understanding of the waste disposal process and environmental personnel are currently looking at ways to factor in waste to various compliance reports in order to reduce air emission or better understand how to incorporate waste factors into compliance reports